What do citizens make from the systems that we make for them ?

Jean-Yves Toussaint, Sophie Vareilles

“Urban planning and urban services: the essential alliance”

Introduction publication to the 92nd ASTEE Congress

> 4-7 June 2013, Nantes (France)

Nantes Métropole
COMMUNAUTÉ URBAINE

VEOLIA
ENVIRONNEMENT

Introduction publication to the 92nd ASTEE Congress
> 4-7 June 2013, Nantes (France)

“Urban planning and urban services: the essential alliance”

Coordination: Marcel Belliot,
Bernard Chocat and Solène Le Fur

Traduction: David Heath, translator (dheath@noos.fr) and Lionel Fintoni, translator/interpreter (lionel.fintoni@orange.fr)

Realisation: id bleue - www.idbleue.com - +33 (0)2 43 95 48 37

CONTENTS

What do citizens make from the systems that we make for them?

by Jean-Yves Toussaint and Sophie Vareilles, INSA Lyon

A city constitutes a vast artifact built by human to dispose of a more "livable" environment. This structure comprises many different systems that were designed and built by technicians to satisfy well-identified needs. But how do users use them? The original point of view developed in this article is that each time we build a new system to satisfy an identified need, this system will create a new offer and engender new practices that are potentially very different from those originally envisaged. May we conclude that it is therefore not possible to think out a city a priori by creating objects that seem necessary to its operation, since each new object will modify the demand for services?

Our research concerning the creation and uses of public urban spaces around urban water management systems leads us to several hypotheses concerning the role of technical systems and objects in daily urban activity.

Detouring and repurposing appear as the two main characteristics of the action. The term detouring refers to people's ability to imagine the many possible paths to achieve their ends. There are many ways of achieving these ends and few are direct or immediate: for example, making a glass to drink from, a bicycle to get around or a tool to dig or build. The means are regulated and not all of the paths are good or acceptable: the ends in no way justify the means (at least according to the moral precepts that define just and fair behavior for everyone). Repurposing, which ergonomists call "catachresis", refers to human beings' ability to find, in their environment, objects or systems, or more generally non-humans suited to assist them with their actions or activities. Typically, when there is no hammer at hand to nail a thumbtack or a nail into the wall, people tend to grab an object (glass, stapler, tape dispenser, etc.) and to use it as a striking tool, without making a mistake concerning its density or strength.

Detouring and repurposing fit into the same categories: they are relationships between the environment and the action here and now (action situations make the elements composing the environment in which the action takes place significant). For people, detouring and repurposing consist in finding elements in the current action's or activity's environment that can be used to meet and satisfy their needs, or if necessary, creating them. The choice of objects in the action would depend on what Gibson[1] calls "affordance", limiting it to visual perception what is perceived as useful and interesting in the action's environment and then opening it up to all living beings in the framework of ethological studies. Detouring and repurposing are specific to living beings and are derived from strategy or instrumental rationality (the adjustment of the means to the targeted ends). In other words, they fall under skills humans stand out from other living beings because they can objectivize, capitalize and pass on these skills (relationship between language and skills as constructed by anthropologists). Detouring and repurposing would be the result of an effective gesture and its learning through which Marcel Mauss[2] defines skills. They concern the body and all the learning required to have it function with objects in view of an activity (learning gestures and body position, educating muscles and reflexes for both sports and tool usage. For example, learning to ride a bike starting from the ability to balance).

The city is one of the largest human artifacts, one of the technical and spatial systems that makes the world livable and that allows human beings to provide for their needs and existence. In urbanized worlds, the non-humans at the disposal of human activities (objects, systems, fauna and flora mobilized or enrolled in human activity) require organizations that ensure their existence. Hence, there are no available objects or systems in daily urban activities that do not involve one or several organizations. This is how "urban services" are rendered. In these conditions, any repurposing would be both a repurposing of the aims defined for objects and systems during their design and fabrication and the repurposing of the organizations that contribute to their existence. This is true for the urban water management systems studied. Here are two examples from among the cases studied.

The first example concerns the construction of an artificial ditch (or a "moat" in the language of its designers) in a public urban space designed halfway between a square and a public park. The layout of this moat incites children to play new games. Its access is forbidden and fencing has been installed to this end. However, the gabion wall that separates the accessible space in the garden from the moat (in fact the wall of the moat) creates possibilities for children to climb and play new games. There is little danger, not enough in any case to warrant the strict application of the rules. The moat in this way allows a certain type of learning of "disobedience" (escaping authority) and, as a result, of autonomy. The children are breaking the rules without engaging in criminal activities, by taking "risks" under the "benevolent" eyes of their parents, who see this as a way of releasing their energy and especially as a way of socializing. The gabions make new games possible: they can be imagined as ramparts or cliffs to be climbed and are also elements of an initiation ritual enabling kids to conquer their fears in the presence of others. This is how an artificial rainwater collection ditch was transformed into a playground and a place for socialization that have nothing to do with the reason for which it was built, yet

give this construction a set of meanings that enables it to be enrolled in daily urban activities that go beyond the technical and organizational objectives of sanitation.

The second example concerns the construction of a reed bed filter to ensure the retention and treatment of water from a stormwater overflow in a small housing estate. At the request of the residents, this structure, which was to have been landscaped, was fenced off instead. A palisade encloses it and prevents it from being seen. The neighbors felt that the landscaped option for this sanitation system presented more risks than advantages: risks concerning new fauna and new nocturnal human activities (groups of teenagers drinking beer and making noise, unauthorized occupation, etc.) that would tend to devalue property already considered as fragile by the owners. This palisade was chosen because it would provide the best value to the property and because it also solved a dispute between neighbors about property boundaries. As a result, the new sanitation system made it possible to solve problems that weren't linked to the alternative sanitation strategy chosen by the authority owning the structure. It was repurposed to ensure the resolving of private business. It was enrolled by the residents who found opportunities for action in it.

In these two examples and in all those that this article is based on, two elements always appear: 1) the appearance of new technical systems and objects or the modification of urban design modify practices, and 2) the new practices prompted by the objects and systems always seem obvious a posteriori.

1) The technical systems and objects constitute offers of social practices (affordances). Any new object or system that appears in the world creates a new offer of practices. In this way, urban objects and systems function like instruments: they make the world comprehensible in a different way at each of their appearances and thus participate in modifying individual and collective behavior by making it possible to carry out uses in renewed or new ways.

2) When we examine the shape of the moat or the place where the stormwater overflow equipped with a reed bed filter was built, the new practices that take place are not surprising. In fact, the fencing that is to prevent access to the moat and that creates a stimulating obstacle for children is an illustration of the placement of objects aimed to inhibit practices. The idea of landscaping the stormwater overflow also participates in the prediction of the effects of this development on the local real estate values to make it more acceptable for the residents. In other words, not just anything was taking place. The observed behaviors are not erratic and the repurposing of functions isn't random: it's the emergence of practices regulated by uses (since they can't be taken for granted and they make sense). The new objects and systems constitute openings in the contingency of the worlds that we are building, but these openings are just as soon closed by the objects' ability to offer new methods of applying rules of usage. Once the opening is shut, the objects become native and are part of the shared goods available for the activities.

Without the opportunities for action that they offer and their enrolment in actions and activities, the technical systems and objects, as well as the organizations that participate in their existence, would be difficult to understand for urban residents and therefore difficult to be perceived in a positive light and accepted as environments in daily activities. The problems appear only when the objects and systems don't open themselves up to any new meaning and don't allow the creation of usages as new practices. In this case, the objects remain something permanently new and produce erratic practices. For example, the technical boxes in the public urban space don't signify anything for the urban residents other than "insignificant" interstices that become places of waste and unauthorized posting, conducive to behavior that must be hidden from others, incivilities and other criminal activities; in short, activities that cause scandals in common spaces. Similarly, black tarp-lined retention ponds, designed only for their technical role and "lost" in the middle of road networks or abandoned urban lands, fit into this category and can generate non-regulated practices. The only public for these objects are the roads and sanitation technicians for whom these objects have meaning. The urban public, for whom these objects and the organizations participating in their existence are intended, thus appear as erratic actors, unable to respect the objects that provide them services. In fact, this last type of object never becomes native. These particular objects are not absorbed into the daily activities of urban publics and therefore cannot contribute to the public good. Hence, they give rise to practices non-regulated by usages and thus to erratic behavior that cannot be confused with repurposing, which is actually the ability to perform usages differently by involving new objects in the practices.

(1) Gibson James, 1986, The Ecological Approach to Visual Perception, London-Hillsdale (NJ),Lawrence Erlbaum Associates

(2) Mauss Marcel, e1999, Sociologie et anthropologie, 1ère éd. 1950, Coll. Quadrige, Ed. PUF, Paris, 482 p.